

**ABSTRACT OF THE DISCLOSURE:**

A method and arrangement for performing Viterbi decoding by means of a trellis is provided. According to one embodiment, the arrangement comprises one or more ACS units. Connections between the inputs and outputs of the ACS  
5 units are implemented in such a manner that in calculating the consecutive metrics of the trellis, the calculated metrics of the previous stage of the trellis obtained from the outputs of the ACS units are directly connected to the inputs of the ACS units to be used in the calculation of the next stage of the trellis.